**Patent Claims:**

1. Automatable method for identifying cancer cells and their precursors, characterized in that at least two markers in a cell or a tissue sample are detected simultaneously and the signal intensities are combined and accredited.

2. Method according to Claim 1, characterized in that the automatic information processing is linked to a diagnostic expert system which consolidates the image information into a proposed diagnosis.

3. Method according to Claims 1 to 2, characterized in that the molecular markers are detected quantitatively by analysing chromogenic colour reactions or fluorescence signals in constituent regions of the tissue sample, with secondary colours or the spatial proximity of the individual colours when using at least two markers providing additional information as compared with single stainings.

4. Method according to Claims 1 to 3, characterized in that the following marker combinations are detected:
her2/neu and Ki67, her2/neu and p53, her2/neu and bcl-2, her2/neu and MN, her2/neu and mdm-2, her2/neu and EGF receptor, bcl-2 and Ki67, bcl-2 and MN, bcl-2 and mdm-2, bcl-2 and EGF receptor, her2/neu and bcl-2, p53 and bcl-2, p53 and MN, p53 and mdm-2, p53 and EGF receptor, p16 and p53, p16 and MN, p16 and mdm-2, p16 and EGF receptor, p16 and Ki67, p16 and her2/neu, p16 and bcl-2, MN and mdm-2, MN and EGF receptor, mdm-2 and EGF receptor.

5. Method according to Claims 1 to 4, characterized in that tumours of the mammary gland, the lung, the cervix, the colon, the skin and the prostate are detected.

6. Method according to Claims 1 to 5, characterized in that it involves reflex

testing.

7. Test kit for implementing the method according to Claims 1 to 6 containing all the necessary reagents.